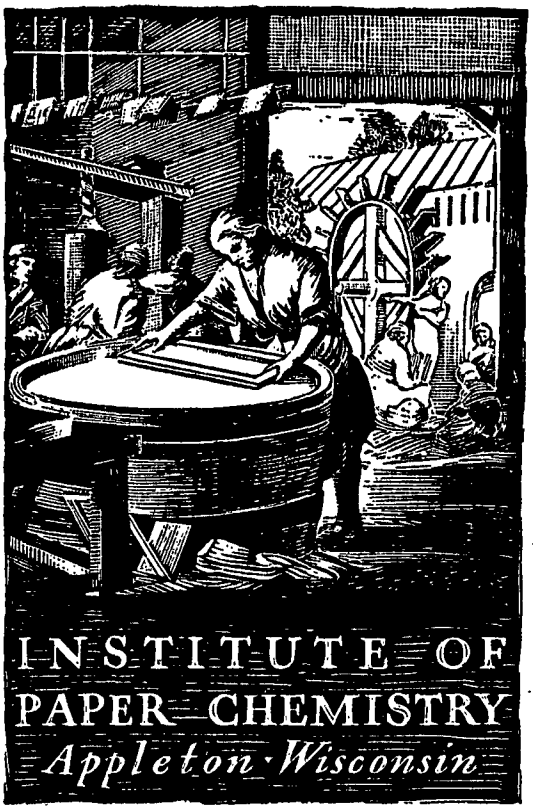


CONTINUOUS BASELINE STUDY

Project 1108-13

Progress Report 105

to

FOURDRINIER KRAFT BOARD INSTITUTE, INC.

April 1, 1956

Your mills are identified by the following code letters in this report:

Mill	Code Letter
Jacksonville	D
Valdosta	C

THE INSTITUTE OF PAPER CHEMISTRY

APPLETON, WISCONSIN

CONTINUOUS BASELINE STUDY

Project 1108-13

Progress Report 105

to

FOURDRINIER KRAFT BOARD INSTITUTE, INC.

April 1, 1956

THE INSTITUTE OF PAPER CHEMISTRY

APPLETON, WISCONSIN

In conjunction with the F.K.I. Continuous Baseline Study, The Institute of Paper Chemistry has been directed to identify the participating mills by means of a scrambled system of code letters. Under this system, which is being used in the current report for the first time, each mill is identified by a code letter different from that used for the previous month. This system of mill identification will be used in all future reports in this series.

During the period March 1 through March 31, one hundred and three different sample lots of 42-lb. Fourdrinier kraft linerboard were submitted by seventeen different F.K.I. mills to The Institute of Paper Chemistry for testing. In addition to the 42-lb. kraft linerboard, one sample of drum linerboard and two samples of miscellaneous linerboard were submitted for evaluation by one of the participating mills. The results on the special stock are tabulated separately in this report. A tabulation of the number of samples classified according to mill may be seen in Table I.

TABLE I

DISTRIBUTION OF 42-LB. LINERBOARD SAMPLES

Mill Code	Samples Submitted
A	8
B	10
C	8
D	4
E	4
F	1
G	4
H	9
I	7
J	3

TABLE I--Continued

DISTRIBUTION OF 42-LB. LINERBOARD SAMPLES

Mill Code	Samples Submitted
K	9
L	1
M	5
N	6
O	6
P	10
Q	8
Total	103

These sample lots were tested for basis weight, caliper, bursting strength, and Elmendorf tear. The average strength results for each mill may be seen in Table II and are graphically presented in Figures 1 to 5. In addition to a comparison of the mill averages for the various tests, Table II also shows the current F.K.I. averages, the cumulative F.K.I. averages, and the F.K.I. indexes. The cumulative F.K.I. average is based on the results for the previous twelve months excluding the current period. Hence, in the case of the current report, it covers the period from March 1, 1955, to February 29, 1956. The F.K.I. indexes are obtained as follows:

$$\frac{\text{current F.K.I. average}}{\text{cumulative F.K.I. average}} \times 100 = \text{F.K.I. index (\%)}$$

The F.K.I. index provides a ready means of comparing the current quality with previous results. For example, the current F.K.I. average basis weight is 42.8 lb., and the cumulative F.K.I. average basis weight is 43.0 lb. Hence, the index for basis weight determined in per cent as indicated above is 99.5. This signifies that the current average basis weight is slightly lower than the cumulative average.

A comparison of the results in Table II and Figure 1 shows that the average basis weight results for all mills conform to the 42-lb. specification set forth in Rule 41. Mills H and J share the highest average basis weight, it being 43.6 lb. or approximately 3.8% higher than the 42-lb. specification. On the other hand, Mills F and M share the lowest average basis weight, it being 42.2 or approximately 0.5% higher than the 42-lb. specification.

The amount by which the mills vary from the 42-lb. specification is as follows:

Mill Code	Percent
A	+3.1
B	+1.2
C	+2.1
D	+1.0
E	+1.2
F	+0.5
G	+0.7
H	+3.8
I	+2.4
J	+3.8
K	+2.4
L	+1.4
M	+0.5
N	+1.7
O	+1.0
P	+2.4
Q	+2.4

A comparison of the average basis weight data for the previous period with the current F.K.I. average indicates that the basis weight results have remained constant at 42.8 lb.

A comparison of the average caliper values for the various mills (see Figure 2) shows that the mill averages vary from a low of 11.9 points

for Mill D to a high of 13.7 points for Mill L. The current F.K.I. average is 12.8 points and the cumulative F.K.I. average is 12.7 points.

The average bursting strength values obtained for each mill are graphically presented in Figure 3. It may be observed in Table II and Figure 3 that the average bursting strength values for the various mills range from a low of 101 for Mill J to a high of 117 for Mill I. The current F.K.I. average bursting strength is 110, only slightly above the cumulative F.K.I. average of 109.

A graphic comparison of the Elmendorf tear results for the various mills is given in Figures 4 and 5. The data of Table II show that Mill J has the highest average machine direction tear value of 411 units whereas Mill B has the lowest value of 297 units. Mill D has the highest cross-machine direction tear value of 408 units and Mill A has the lowest value of 353 units. It may be noted that the current F.K.I. average machine and cross-machine direction tear results are slightly lower than the cumulative average.

A comparison of the F.K.I. indexes indicates that, for the current period, the current F.K.I. averages for basis weight and Elmendorf tear are slightly lower than the respective cumulative F.K.I. averages, whereas the curremt F.K.I. averages for caliper and bursting strength are slightly higher than the cumulative F.K.I. averages.

In order to compare the variation within a given mill, the test results for each particular mill have been tabulated in Tables III to XIX for Mills A to Q, respectively. In addition to the current and cumulative

averages, the mill factor and mill index are given for each mill. The cumulative mill average is the average test result obtained on the samples submitted by the particular mill for the previous twelve months excluding the current period. The mill factor and the mill index are obtained as follows:

$$\frac{\text{current mill average}}{\text{cumulative mill average}} \times 100 = \text{mill factor (\%)}$$

$$\frac{\text{current mill average}}{\text{cumulative F.K.I. average}} \times 100 = \text{mill index (\%)}$$

The mill factor and the mill index serve as a ready means for comparing the current mill results either with the previous results for that particular mill or with the cumulative F.K.I. results. The reports also contain a comparison of the test data obtained at the mills with test data obtained at The Institute of Paper Chemistry.

The results obtained on the special drum stock may be seen in Table XX.

It may be noted in Tables III through XX that the test data include information about the sheet finish. The summarized results for the mills which submitted sample lots during the current period are as follows:

Mill Code	No. of Sample Lots W.F.	D.F.	Misc.
A	8[a]		
B	10[a]		
C	8		
D	4		
E	4		
F	1[a]		
G	4[a]		
H	9		
I	7		
J	3		

Mill Code	No. of Sample Lots W.F.	D.F.	Misc.
K	9		
L	1		
M	5[a]		
N	6		
O			6[c]
P	10		
Q	8		
R	1[b]		

[a] One side only; [b] Drum Linerboard; [c] Sheet finish not reported.

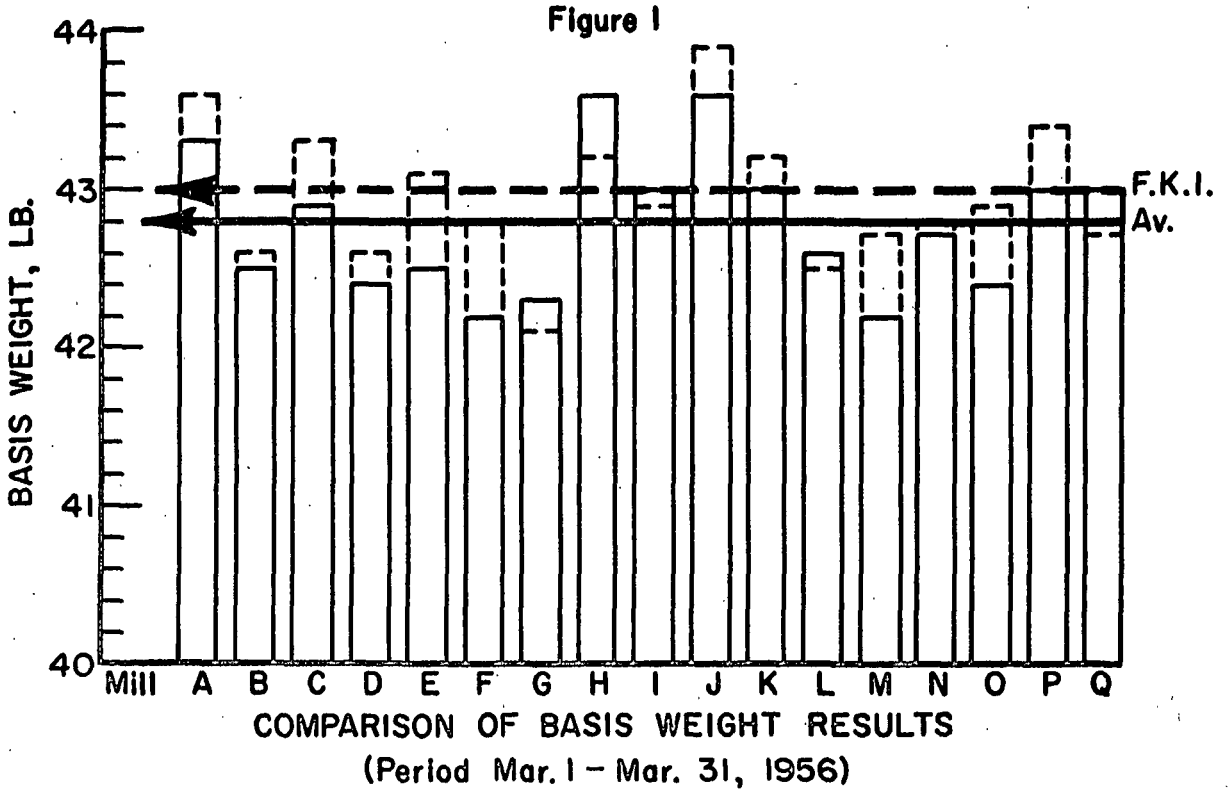
The results indicate that a majority of the mills are using a water finish on their 42-lb. linerboard.

TABLE II

SUMMARY OF COMPOSITE MILL AVERAGES--MARCH 1 THROUGH MARCH 31, 1956

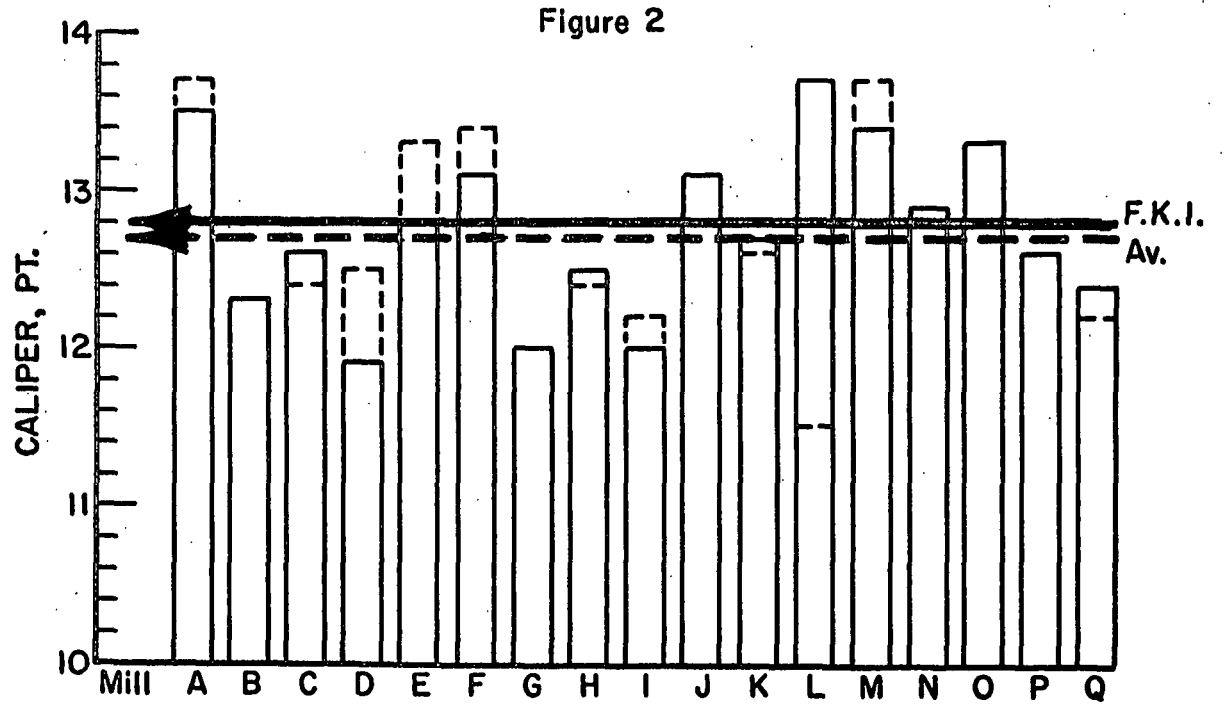
Mill	Basis Weight, lb.	Caliper, points	Bursting Strength, p.s.i. gage	Elmendorf Tear, g./sheet	
				In Machine	Cross Machine
A	43.3	13.5	107	318	353
B	42.5	12.3	108	297	367
C	42.9	12.6	109	360	388
D	42.4	11.9	108	372	408
E	42.5	12.8	107	346	374
F	42.2	13.1	113	331	365
G	42.3	12.0	116	352	388
H	43.6	12.5	111	361	397
I	43.0	12.0	117	317	369
J	43.6	13.1	101	411	388
K	43.0	12.7	113	336	384
L	42.6	13.7	114	373	407
M	42.2	13.4	108	334	358
N	42.7	12.9	111	373	372
O	42.4	13.3	114	338	371
P	43.0	12.6	111	322	368
Q	43.0	12.4	105	355	387
Current FKI Average:	42.8	12.8	110	347	379
Cumulative FKI Average:	43.0	12.7	109	352	384
FKI Index, %	99.5	100.8	100.9	98.6	98.7

Figure 1



COMPARISON OF BASIS WEIGHT RESULTS
(Period Mar. 1 – Mar. 31, 1956)

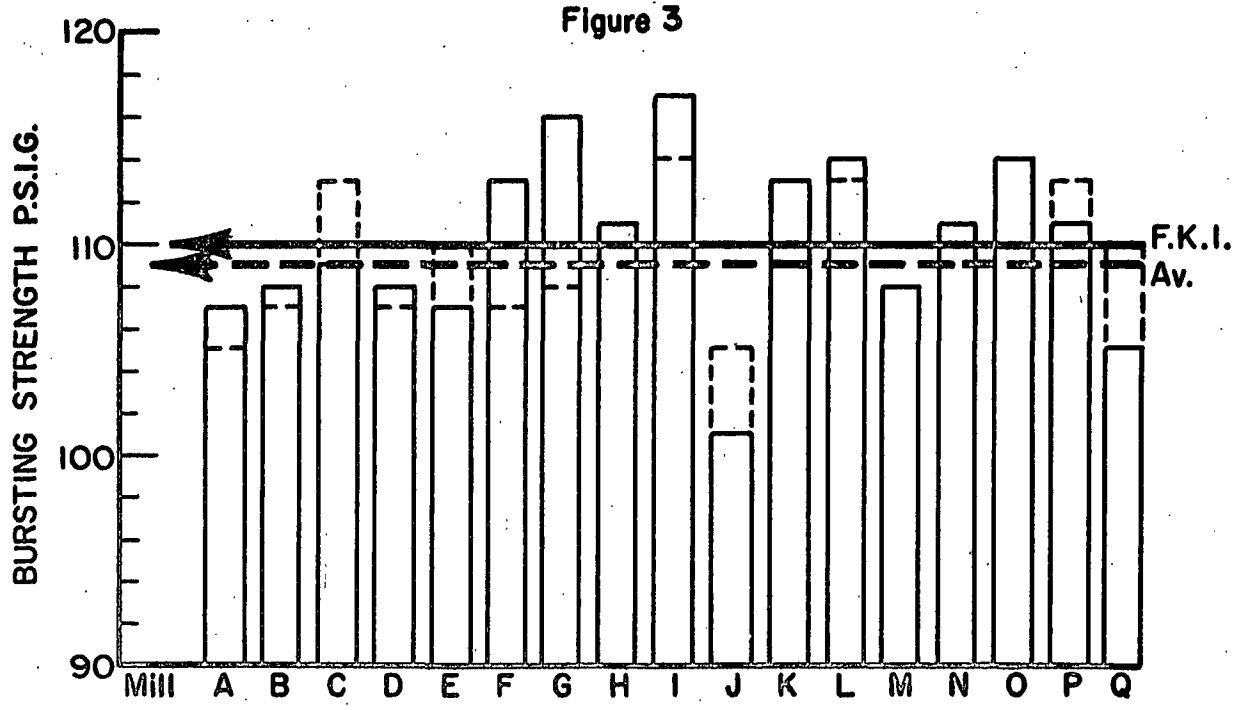
Figure 2



COMPARISON OF CALIPER RESULTS
(Period Mar. 1 – Mar. 31, 1956)

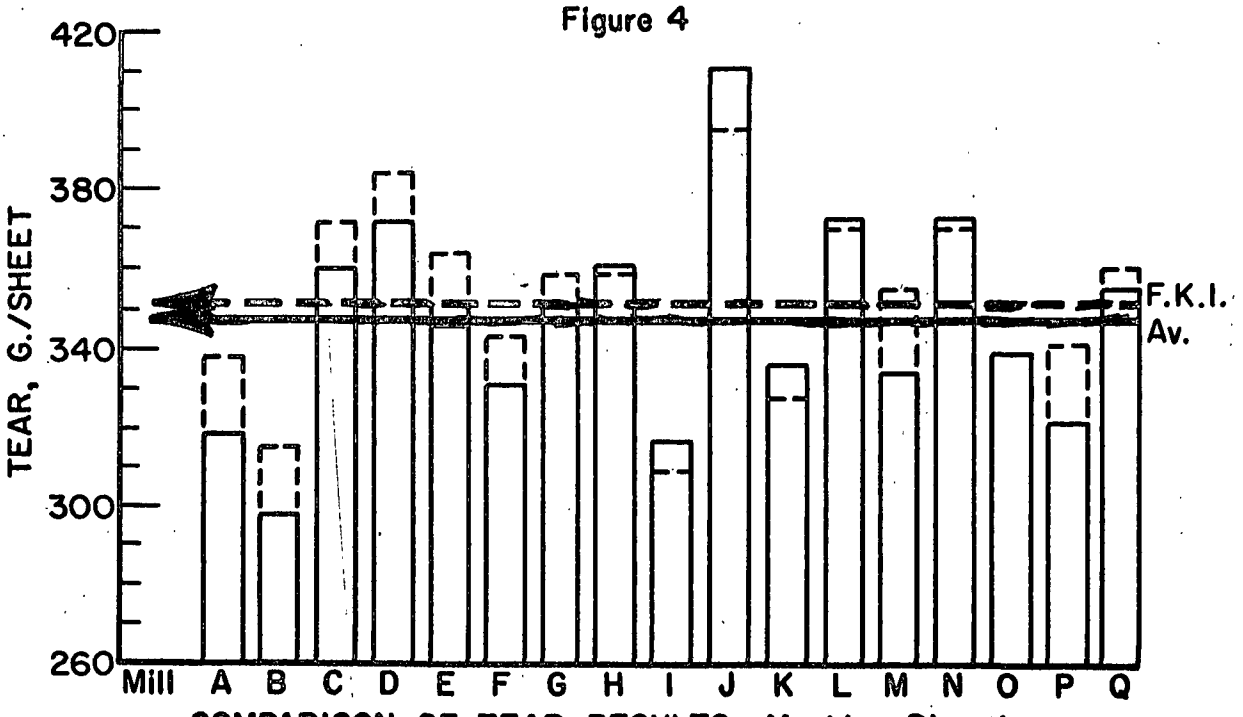
——— Current mill average
– – – – – Cumulative mill average

Figure 3



COMPARISON OF BURSTING STRENGTH RESULTS
(Period Mar. 1 – Mar. 31, 1956)

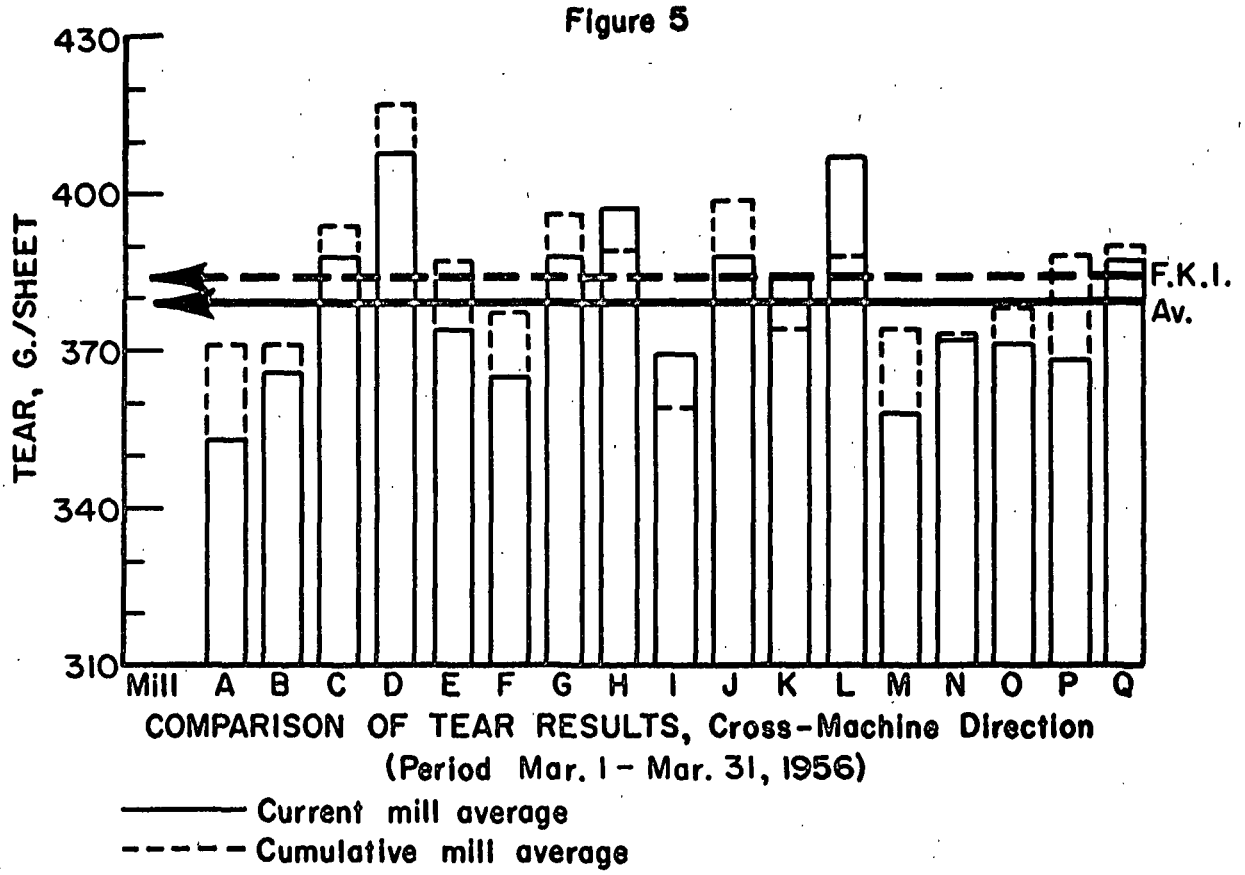
Figure 4



COMPARISON OF TEAR RESULTS, Machine Direction
(Period Mar. 1 – Mar. 31, 1956)

——— Current mill average
– – – – – Cumulative mill average

Figure 5


430
400
370
340
310
TEAR, G./SHEET
F.K.I.
Av.
Mill A B C D E F G H I J K L M N O P Q
COMPARISON OF TEAR RESULTS, Cross-Machine Direction
(Period Mar. 1 - Mar. 31, 1956)
Current mill average
Cumulative mill average

SUMMARY OF INSTITUTE DATA--MARCH 1 THROUGH MARCH 31, 1956

TABLE III

MILL A -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
168847	WF ISL	3/ 9/56	2/15/56	1	46.0	43.2	44.6	14.2	12.8	13.3	132	95	112	352	280	319	384	320	355[a]
168848	WF ISL	3/ 9/56	2/15/56	1	45.8	43.6	44.7	13.9	12.6	13.2	133	95	112	376	304	330[a]	392	344	367[a]
168849	WF ISL	3/ 9/56	2/20/56	1	43.4	41.4	42.2	13.8	12.3	13.2	122	83	104	368	264	311[a]	360	304	338[a]
168850	WF ISL	3/ 9/56	2/20/56	1	43.0	41.0	42.2	14.0	12.9	13.4	112	84	100	328	280	302	400	296	345[a]
168851	WF ISL	3/ 9/56	2/21/56	1	45.8	42.4	44.0	14.4	13.1	13.8	123	84	106	368	272	322[a]	400	336	366[a]
168852	WF ISL	3/ 9/56	2/21/56	1	46.0	43.4	44.1	14.9	13.0	14.0	135	89	110	360	272	324	416	304	367[a]
168853	WF ISL	3/ 9/56	2/22/56	1	43.6	41.8	42.4	14.0	12.8	13.5	125	91	105	360	272	312	360	312	339[a]
168854	WF ISL	3/ 9/56	2/22/56	1	43.8	41.6	42.2	13.9	13.0	13.4	126	82	106	384	264	322[a]	376	320	349[a]
Current Mill Average:							43.3			13.5			107			318			353
Cumulative Mill Average:							43.6			13.7			105			337			371
Mill Factor, %							99.3			98.5			101.9			94.4			95.1
Mill Index, %							100.7			106.3			98.2			90.3			91.9

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE IV

MILL B -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
168705	WF1S	3/ 1/56	2/22/56	1	43.0	41.0	42.0	12.7	12.0	12.2	122	82	105	328	248	291[a]	408	320	362[a]
168706	WF1S	3/ 1/56	2/23/56	1	43.6	40.0	41.9	12.8	11.7	12.2	119	88	108	344	240	293[a]	400	336	373[a]
168768	WF1S	3/ 5/56	2/27/56	1	44.0	42.0	43.1	12.8	12.0	12.2	130	85	110	384	256	319	416	336	379[a]
168805	WF1S	3/ 6/56	2/28/56	1	43.4	42.0	42.4	13.3	11.9	12.3	128	85	111	328	248	289[a]	424	344	369[a]
168958	WF1S	3/19/56	3/14/56	1	44.0	41.6	42.6	13.0	11.9	12.2	120	99	107	336	256	292[a]	408	344	380[a]
168959	WF1S	3/19/56	3/15/56	1	43.2	41.6	42.4	12.9	11.8	12.2	134	93	109	336	264	303	400	328	359[a]
168960	WF1S	3/19/56	3/16/56	1	45.8	41.8	42.7	13.0	11.8	12.3	124	86	102	352	272	308[a]	408	336	365[a]
169042	WF1S	3/24/56	3/17/56	1	44.0	42.0	42.6	13.2	11.8	12.4	129	89	109	328	248	291	392	320	349[a]
169043	WF1S	3/24/56	3/18/56	1	44.0	41.6	42.5	12.9	11.6	12.3	122	95	112	320	232	286	424	336	378[a]
169044	WF1S	3/24/56	3/19/56	1	43.8	41.8	42.4	12.6	11.6	12.2	129	91	108	328	272	297	392	320	355[a]
Current Mill Average:							42.5			12.3			108			297			367
Cumulative Mill Average:							42.6			12.3			107			315			371
Mill Factor, %							99.8			100.0			100.9			94.3			98.9
Mill Index, %							98.8			96.9			99.1			84.4			95.6

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE V

MILL C -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet In			Elmendorf Tear, g./sheet Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
168751	W.F.	3/ 3/56	2/27/56	-	43.6	40.4	41.8	13.6	12.0	12.8	118	82	104	400	312	361[a]	456	360	401[a]
168769	W.F.	3/ 5/56	2/29/56	-	44.0	42.0	43.2	13.5	12.5	12.9	129	95	110	416	328	375[a]	448	352	400[a]
169016	W.F.	3/21/56	3/ 1/56	-	45.0	41.0	43.7	13.6	11.9	12.6	128	90	112	464	304	374[a]	432	360	391[a]
169017	W.F.	3/21/56	3/12/56	-	44.8	41.8	43.5	13.7	12.2	12.7	126	91	110	400	320	364[a]	448	352	393[a]
169018	W.F.	3/21/56	3/12/56	-	44.8	41.6	43.2	13.4	11.9	12.7	129	87	110	400	304	343[a]	424	344	395[a]
169019	W.F.	3/21/56	3/12/56	-	44.0	41.4	43.0	13.5	12.0	12.6	122	91	107	432	256	353[a]	424	320	381[a]
169054	W.F.	3/27/56	3/13/56	-	44.0	42.0	43.0	13.0	11.7	12.3	122	98	111	424	288	357	400	344	372[a]
169055	W.F.	3/27/56	3/13/56	-	43.4	41.8	42.2	13.0	11.8	12.2	133	92	112	416	304	349[a]	400	344	371[a]
Current Mill Average:							42.9			12.6			109			360			388
Cumulative Mill Average:							43.3			12.4			113			372			394
Mill Factor, %							99.1			101.6			96.5			96.8			98.5
Mill Index, %							99.8			99.2			100.0			102.3			101.0

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE VI

MILL D -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
168845	W.B.	3/ 9/56	2/13/56	-	43.4	40.0	42.0	12.6	11.2	11.8	129	94	109	400	320	354	432	344	396[a]
168846	W.B.	3/ 9/56	2/14/56	-	43.4	40.0	42.2	12.5	11.0	11.8	120	88	105	392	312	353[a]	488	336	405[a]
169014	W.B.	3/21/56	2/22/56	-	46.0	42.0	43.7	13.3	11.9	12.5	133	85	109	448	352	401[a]	496	408	442[a]
169015	W.B.	3/21/56	2/29/56	-	42.8	40.0	41.6	12.0	11.0	11.4	125	89	109	424	312	380[a]	432	352	389[a]
Current Mill Average:							42.4			11.9			108			372			408
Cumulative Mill Average:							42.6			12.5			107			384			417
Mill Factor, %							99.5			95.2			100.9			96.9			97.8
Mill Index, %							98.6			93.7			99.1			105.7			106.2

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE VII

MILL E -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
168770	W.	3/ 5/56	2/24/56	2	43.0	39.6	41.8	13.4	11.8	12.8	124	80	104	384	256	345[a]	432	336	371
168924	W.	3/15/56	3/ 1/56	4	44.2	42.0	43.5	13.7	12.8	13.2	120	75	106	368	320	353	408	336	371[a]
168925	W.	3/15/56	3/ 7/56	2	44.0	40.0	42.3	12.8	11.9	12.3	130	95	110	384	280	335[a]	432	352	377[a]
169053	W.	3/27/56	3/22/56	4	43.6	41.6	42.6	13.4	12.6	13.0	121	97	108	392	328	351[a]	416	352	376[a]
Current Mill Average:							42.5			12.8			107			346			374
Cumulative Mill Average:							43.1			13.3			110			364			387
Mill Factor, %							98.6			96.2			97.3			95.1			96.6
Mill Index, %							98.8			100.8			98.2			98.3			97.4

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE VIII

MILL F -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
168752	WF1S	3/ 3/56	2/24/56	3	44.0	40.4	42.2	13.6	12.6	13.1	133	94	113	400	280	331[a]	456	336	365[a]
Current Mill Average:							42.2			13.1			113			331			365
Cumulative Mill Average:							42.8			13.4			107			343			377
Mill Factor, %							98.6			97.8			105.6			96.5			96.8
Mill Index, %							98.1			103.1			103.7			94.0			95.1

TABLE IX

MILL G -- 42-LB. LINERBOARD

168753	WF1S	3/ 3/56	2/24/56	1	43.0	41.8	42.4	12.6	11.7	12.1	131	102	116	376	296	335[a]	416	344	383[a]
168754	WF1S	3/ 3/56	2/24/56	-	42.4	41.6	42.0	12.8	11.5	12.1	142	100	118	376	304	345[a]	440	328	378[a]
168956	WF1S	3/19/56	3/ 8/56	1	42.6	41.8	42.2	12.8	11.4	12.0	138	86	111	432	272	369	464	360	390[a]
168957	WF1S	3/19/56	3/ 8/56	1	43.6	41.8	42.6	12.1	11.2	11.8	129	103	116	416	320	356	432	352	399[a]
Current Mill Average:							42.3			12.0			116			352			388
Cumulative Mill Average:							42.1			12.0			108			358			396
Mill Factor, %							100.5			100.0			107.4			98.3			98.0
Mill Index, %							98.4			94.5			106.4			100.0			101.0

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE X

MILL H -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
168772	W.F.	3/ 5/56	2/29/56	4	43.2	42.4	42.6	13.0	12.1	12.6	139	82	108	472	304	385[a]	416	320	381[a]
168773	W.F.	3/ 5/56	3/ 1/56	4	44.4	41.8	43.3	13.0	12.1	12.7	155	95	119	464	312	374[a]	432	360	399[a]
168774	W.F.	3/ 5/56	3/ 2/56	4	44.2	43.0	43.6	13.0	12.0	12.6	130	84	114	392	344	369[a]	456	352	401[a]
168902	W.F.	3/14/56	3/ 7/56	4	45.6	44.0	44.6	12.8	12.1	12.4	138	95	113	440	312	362[a]	440	360	407[a]
168903	W.F.	3/14/56	3/ 8/56	4	45.0	43.2	44.2	13.2	12.3	12.8	136	92	115	416	352	371[a]	456	384	423[a]
168904	W.F.	3/14/56	3/ 9/56	4	45.0	43.8	44.2	13.2	12.3	12.9	125	80	103	456	312	376[a]	432	360	394[a]
168941	W.F.	3/19/56	3/14/56	4	44.0	42.2	43.2	12.9	11.5	12.2	126	76	109	384	296	343[a]	448	344	393[a]
168942	W.F.	3/19/56	3/15/56	4	44.0	42.8	43.7	13.0	11.0	12.4	134	85	111	384	288	345[a]	416	360	392[a]
168943	W.F.	3/19/56	3/16/56	4	44.0	42.0	42.8	12.8	12.0	12.2	130	74	104	352	304	327[a]	440	312	381[a]
Current Mill Average:							43.6			12.5			111			361			397
Cumulative Mill Average:							43.2			12.4			110			358			389
Mill Factor, %							100.9			100.8			100.9			100.8			102.1
Mill Index, %							101.4			98.4			101.8			102.6			103.4

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE XI

MILL I -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
168697	W.F.	3/ 1/56	2/13/56	1	43.6	42.4	42.9	12.4	11.0	11.6	142	74	115	456	280	338[a]	400	328	369[a]
168698	W.F.	3/ 1/56	2/21/56	1	44.0	42.0	43.0	12.1	11.4	11.9	138	99	120	360	296	329[a]	408	328	372[a]
168699	W.F.	3/ 1/56	2/23/56	1	43.6	41.8	42.8	12.3	11.4	11.8	138	101	118	368	256	312[a]	448	328	379[a]
168766	W.F.	3/ 5/56	2/27/56	1	43.2	42.0	42.5	12.0	11.3	11.6	143	107	120	344	232	303[a]	400	312	349[a]
168767	W.F.	3/ 5/56	2/29/56	1	44.2	42.2	42.9	12.3	11.6	11.9	147	98	120	352	272	311[a]	384	320	357[a]
168909	W.F.	3/14/56	3/ 6/56	1	44.0	42.0	43.1	12.2	11.4	11.9	147	102	120	344	272	321[a]	448	344	383[a]
169052	W.F.	3/27/56	3/11/56	1	45.2	43.0	43.6	13.8	13.0	13.3	120	83	104	352	256	306	416	344	373[a]
Current Mill Average:							43.0			12.0			117			317			369
Cumulative Mill Average:							42.9			12.2			114			309			359
Mill Factor, %							100.2			98.4			102.6			102.6			102.8
Mill Index, %							100.0			94.5			107.3			90.1			96.1

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE XII

MILL J -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
168718	S.F.	3/ 1/56	2/24/56	7	45.0	42.2	43.7	13.9	12.0	13.2	128	72	101	456	392	419[a]	432	360	398[a]
168771	S.F.	3/ 5/56	2/28/56	7	44.0	41.8	42.8	14.0	12.2	13.2	131	85	106	456	360	394[a]	408	344	383[a]
169021	S.F.	3/22/56	3/14/56	7	45.2	43.2	44.3	13.7	12.7	13.1	114	67	95	480	336	420[a]	432	336	381[a]
Current Mill Average:							43.6			13.1			101			411			388
Cumulative Mill Average:							43.9			13.1			105			395			398
Mill Factor, %							99.3			100.0			96.2			104.1			97.5
Mill Index, %							101.4			103.1			92.7			116.8			101.0

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE XIII

MILL K -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
168702	W.F.	3/ 1/56	2/21/56	2	44.0	42.0	43.3	13.3	12.0	12.7	138	91	116	384	304	346	480	344	395[a]
168822	W.F.	3/ 7/56	2/20/56	2	44.2	42.0	42.9	13.8	12.1	12.9	141	98	113	400	248	337[a]	424	344	374[a]
168945	W.F.	3/19/56	2/22/56	2	43.8	42.0	42.6	13.3	11.6	12.8	140	94	112	416	304	347[a]	496	352	409[a]
168946	W.F.	3/19/56	2/22/56	2	43.8	42.0	42.5	13.5	12.1	12.9	134	83	108	368	280	321[a]	400	352	383[a]
168947	W.F.	3/19/56	2/23/56	2	43.4	42.0	42.6	13.3	12.0	12.8	131	80	110	384	272	332	416	312	377[a]
168948	W.F.	3/19/56	2/23/56	2	44.0	42.0	43.3	13.0	12.0	12.6	144	90	113	440	288	334[a]	432	288	381[a]
168949	W.F.	3/19/56	2/24/56	2	44.0	42.2	43.3	13.1	11.7	12.6	134	95	114	352	288	325	416	344	376[a]
168950	W.F.	3/19/56	2/27/56	2	44.0	42.0	43.4	13.1	12.0	12.6	140	90	118	400	288	338	400	336	376[a]
168951	W.F.	3/19/56	2/29/56	2	44.0	42.2	43.2	13.3	12.0	12.6	138	95	117	400	304	349	424	344	384[a]
Current Mill Average:							43.0			12.7			113			336			384
Cumulative Mill Average:							43.2			12.6			110			327			374
Mill Factor, %							99.5			100.8			102.7			102.8			102.7
Mill Index, %							100.0			100.0			103.7			95.5			100.0

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE XIV

MILL L -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
168727	W.F.	3/ 2/56	2/ 9/56	4	44.0	41.2	42.6	14.5	12.8	13.7	125	102	114	440	320	373[a]	456	368	407[a]
Current Mill Average:							42.6			13.7			114			373			407
Cumulative Mill Average:							42.5			11.5			113			370			388
Mill Factor, %							100.2			119.1			100.9			100.8			104.9
Mill Index, %							99.1			107.9			104.6			106.0			106.0

TABLE XV

MILL M -- 42-LB. LINERBOARD

168707	WF1S	3/ 1/56	2/23/56	2	42.6	40.2	41.7	14.7	13.4	14.1	120	84	103	344	272	315[a]	416	344	377[a]
168717	WF1S	3/ 1/56	2/27/56	2	43.8	42.0	42.6	14.1	12.8	13.5	114	80	98	376	296	345[a]	456	336	359[a]
168954	WF1S	3/19/56	3/14/56	2	43.0	41.8	42.1	13.9	11.7	12.9	134	93	114	392	296	351[a]	456	320	365[a]
168955	WF1S	3/19/56	3/15/56	2	43.4	41.4	42.0	14.3	12.7	13.1	132	93	115	416	280	330[a]	368	320	343[a]
169046	WF1S	3/26/56	3/22/56	2	43.6	42.0	42.7	13.8	12.8	13.2	127	90	108	384	296	329[a]	368	320	347[a]
Current Mill Average:							42.2			13.4			108			334			358
Cumulative Mill Average:							42.7			13.7			108			355			374
Mill Factor, %							98.8			97.8			100.0			94.1			95.7
Mill Index, %							98.1			105.5			99.1			94.9			93.2

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE XIV

MILL L -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
168727	W.F.	3/ 2/56	2/ 9/56	4	44.0	41.2	42.6	14.5	12.8	13.7	125	102	114	440	320	373[a]	456	368	407[a]
Current Mill Average:							42.6			13.7			114			373			407
Cumulative Mill Average:							42.5			11.5			113			370			388
Mill Factor, %							100.2			119.1			100.9			100.8			104.9
Mill Index, %							99.1			107.9			104.6			106.0			106.0

TABLE XV

MILL M -- 42-LB. LINERBOARD

168707	WF1S	3/ 1/56	2/23/56	2	42.6	40.2	41.7	14.7	13.4	14.1	120	84	103	344	272	315[a]	416	344	377[a]
168717	WF1S	3/ 1/56	2/27/56	2	43.8	42.0	42.6	14.1	12.8	13.5	114	80	98	376	296	345[a]	456	336	359[a]
168954	WF1S	3/19/56	3/14/56	2	43.0	41.8	42.1	13.9	11.7	12.9	134	93	114	392	296	351[a]	456	320	365[a]
168955	WF1S	3/19/56	3/15/56	2	43.4	41.4	42.0	14.3	12.7	13.1	132	93	115	416	280	330[a]	368	320	343[a]
169046	WF1S	3/26/56	3/22/56	2	43.6	42.0	42.7	13.8	12.8	13.2	127	90	108	384	296	329[a]	368	320	347[a]
Current Mill Average:							42.2			13.4			108			334			358
Cumulative Mill Average:							42.7			13.7			108			355			374
Mill Factor, %							98.8			97.8			100.0			94.1			95.7
Mill Index, %							98.1			105.5			99.1			94.9			93.2

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE XVI

MILL N -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
168708	W.F.	3/ 1/56	2/21/56	-	44.0	42.2	43.3	13.6	12.2	12.8	135	104	116	504	360	393[a]	456	352	391[a]
168709	W.F.	3/ 1/56	2/21/56	-	44.0	42.0	43.4	13.8	12.7	13.2	133	76	110	456	336	405[a]	408	368	389[a]
168862	W.F.	3/10/56	3/ 2/56	-	43.6	41.0	42.6	13.8	12.4	13.1	121	86	106	424	280	349[a]	376	320	341[a]
168863	W.F.	3/10/56	3/ 2/56	-	43.2	41.6	42.4	13.5	12.0	12.8	128	92	110	392	296	355[a]	432	304	360[a]
169012	W.F.	3/21/56	3/13/56	-	43.0	41.0	42.0	13.4	12.0	12.8	132	98	110	400	336	365[a]	432	352	377[a]
169013	W.F.	3/21/56	3/13/56	-	43.8	41.8	42.2	13.1	12.0	12.6	136	99	115	472	320	370[a]	416	352	375[a]
Current Mill Average:							42.7			12.9			111			373			372
Cumulative Mill Average:							42.8			12.8			111			370			373
Mill Factor, %							99.8			100.8			100.0			100.8			99.7
Mill Index, %							99.3			101.6			101.8			106.0			96.9

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE XVII

MILL O -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
168755		3/ 3/56	2/11/56	1	43.0	42.0	42.5	14.1	12.7	13.5	135	100	113	368	304	331[a]	408	328	363[a]
168756		3/ 3/56	2/13/56	1	43.6	41.0	41.8	13.2	11.8	12.6	143	94	118	360	280	322[a]	376	328	353[a]
168757		3/ 3/56	2/16/56	1	44.0	42.6	43.6	14.2	13.1	13.9	139	88	113	408	320	353[a]	464	352	387[a]
168758		3/ 3/56	2/21/56	1	43.0	40.6	41.9	14.0	12.6	13.4	130	88	108	400	296	344[a]	488	336	383[a]
168806		3/ 6/56	2/24/56	1	43.2	41.4	42.0	13.2	11.9	12.7	148	100	116	376	280	332[a]	392	344	370[a]
168807		3/ 6/56	2/27/56	1	43.2	42.0	42.4	14.5	12.8	13.7	137	105	118	416	272	344[a]	400	352	371[a]
Current Mill Average:							42.4			13.3			114			338			371
Cumulative Mill Average:							42.9			13.3			110			338			378
Mill Factor, %							98.8			100.0			103.6			100.0			98.1
Mill Index, %							98.6			104.7			104.6			96.0			96.6

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE XVIII

MILL P -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
168703	W.F.	3/ 1/56	2/21/56	2	45.0	43.0	44.0	13.7	12.8	13.1	133	102	116	384	288	334	400	320	373[a]
168704	W.F.	3/ 1/56	2/23/56	2	43.0	41.6	42.3	13.0	11.5	12.5	131	82	109	360	264	317	392	336	369[a]
168823	W.F.	3/ 7/56	2/26/56	2	43.4	42.4	42.9	12.9	12.2	12.6	121	93	109	440	264	316[a]	384	328	354[a]
168824	W.F.	3/ 7/56	3/ 1/56	1	43.8	42.6	43.3	12.9	12.0	12.6	126	81	109	368	288	323	400	336	361[a]
168890	W.F.	3/13/56	3/ 4/56	2	44.0	42.0	43.4	13.2	12.1	12.7	126	81	110	376	272	325	416	344	377[a]
168891	W.F.	3/13/56	3/ 6/56	1	43.8	43.2	43.5	12.9	12.3	12.6	125	83	105	368	304	333	400	320	377[a]
168980	W.F.	3/20/56	3/12/56	2	43.2	41.0	42.0	12.6	11.8	12.2	124	93	108	352	280	318	400	336	357[a]
168981	W.F.	3/20/56	3/12/56	2	43.4	40.0	42.1	12.7	11.6	12.1	135	104	118	352	280	315[a]	392	312	357[a]
169032	W.F.	3/23/56	3/19/56	2	43.8	42.2	42.7	13.1	12.0	12.8	131	66	112	360	288	321[a]	400	336	371[a]
169033	W.F.	3/23/56	3/19/56	2	44.0	42.0	43.4	13.0	12.0	12.5	129	100	111	360	256	317[a]	432	352	383[a]
Current Mill Average:							43.0			12.6			111			322			368
Cumulative Mill Average:							43.4			12.6			113			341			388
Mill Factor, %							99.1			100.0			98.2			94.4			94.8
Mill Index, %							100.0			99.2			101.8			91.5			95.8

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE XIX

MILL Q -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
168700	W.F.[b]	3/ 1/56	2/20/56	2	43.0	41.6	42.3	13.0	12.0	12.5	118	82	101	424	288	355[a]	400	352	377[a]
168701	W.F.[b]	3/ 1/56	2/21/56	2	44.2	42.6	43.4	12.9	12.0	12.5	137	84	110	416	296	355[a]	416	344	387[a]
168803	W.F.[b]	3/ 6/56	2/29/56	2	44.0	42.2	43.7	13.0	12.3	12.7	128	90	109	408	304	354[a]	456	352	386[a]
168804	W.F.[b]	3/ 6/56	3/ 1/56	2	44.0	41.6	43.1	12.9	12.0	12.5	135	88	107	432	304	355[a]	408	352	379[a]
168892	W.F.[b]	3/13/56	3/ 5/56	2	44.0	41.6	43.1	13.0	12.0	12.6	133	83	106	392	320	351[a]	400	328	363[a]
168893	W.F.[b]	3/13/56	3/ 6/56	2	43.0	42.0	42.4	12.1	11.8	12.0	130	72	104	416	320	367[a]	432	384	409[a]
168952	W.F.[b]	3/19/56	3/11/56	2	43.2	42.0	42.5	12.2	11.0	11.8	127	75	105	448	320	355	432	360	394[a]
168953	W.F.[b]	3/19/56	3/12/56	2	44.0	42.4	43.2	13.3	12.2	13.0	133	76	102	400	304	345	448	336	403[a]
Current Mill Average:							43.0			12.4			105			355			387
Cumulative Mill Average:							42.7			12.2			110			360			390
Mill Factor, %							100.7			101.6			95.5			98.6			99.2
Mill Index, %							100.0			97.6			96.3			100.9			100.8

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

[b]The mill data sheet identifies the finish as WF1S.

SUMMARY OF INSTITUTE DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE XX

MILL R -- MISCELLANEOUS

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
47-lb. Drum Linerboard																			
168864	W.F.	3/10/56	3/ 1/56	2	48.4	45.2	47.0	15.0	13.0	14.3	125	77	97	424	328	384[a]	464	320	369[a]
Current Mill Average:							47.0			14.3			97			384			369
Cumulative Mill Average:							47.1			14.3			101			391			403
Mill Factor, %							99.8			100.0			96.0			98.2			91.6
38-lb. Linerboard																			
168865	WF1S	3/10/56	3/ 7/56	2	39.8	37.6	38.6	12.4	11.6	12.1	103	72	90	408	280	337[a]	456	280	313[a]
169047	WF1S	3/26/56	3/23/56	2	39.4	37.8	38.2	12.5	11.1	11.8	116	73	90	384	280	331[a]	344	272	300[a]

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

As a supplementary part of the Continuous Baseline Study, comparison of the mill test results with those obtained at The Institute of Paper Chemistry on corresponding samples have been included in this report. As may be noted in Table XXI, the atmospheric conditions used prior to and during the testing period varied considerably.

TABLE XXI

	Preconditioning			Conditioning		
Code	R.H., %	Temp., °F.	Time, hr.	R.H., %	Temp., °F.	Time, hr.
A	50	73	264-360	50	73	264-360
B		None		48-54	68-72	--
C	50	73	24-48	50	73	48
D		None		52-55	72	48
E		None		51-57	70-74	--
F	50	72	68	46	72	1.5
G	50	73	24	50	73	24
H	32-34	78	8	49-51	72-73	16
I	48-80	64--75	0.5	50	70	24-48
J	50	73	24	50	73	--
K		None		50	73	24
L		None		50	73	24
M		None		35-61	78-82	--
N		None		50	72-73	0.5
O		None		33-78	68-80	--
P		None		50-60	68-73	24
Q		None		50	73	24

A summary of the Institute and mill test results for the current period is shown in Table XXII, and a comparison of differences between Institute and mill test results is given in Table XXIII for the current period and the two previous periods. The comparisons are given in Tables XXIV to XXXX, for the 42-lb. liner samples. A comparison of the special drum stock is given in Table XLI. In all the comparisons given in Tables XXII to XLI, the Institute's test values have been used as the reference line.

A comparison of the test data in Tables XXII and XXIII reveals the level of agreement between mill and Institute data for basis weight, caliper, bursting strength, and Elmendorf tear. Table XXII shows the average difference encountered in the comparison of Institute and mill test results for the sample lots submitted by each mill for the current period, as well as the maximum difference encountered in comparing the Institute and mill test results for a given sample lot. In Table XXIII, the average differences shown for each test in Table XXII have been calculated on a percentage basis for each mill. In addition, for purposes of comparison, the average percentage differences for the preceding two periods are shown.

It may be noted in Table XXIII that the maximum variation between the average basis weight results of the Institute and those of a given mill on corresponding samples is one per cent for the current period. By comparison, the maximum percentage variation noted for the previous two periods was also one per cent. A variation of the magnitude of one per cent indicates that the agreement between Institute and mill test results is highly satisfactory. Further, it may be noted that the average basis weight results for Mills A, C, K, L, N, and Q are slightly higher than those for the Institute, the average results for Mills D, E, G, H, J, M, O, and P are slightly lower and the average results for Mills B, F, and I are the same.

The maximum variation in caliper for the current period is six per cent. This variation is nearly the same as the maximum variations for the previous two periods--namely, eight per cent. Compared with the Institute's test results, the test results for all mills are slightly

lower with the exception of the result for Mill I which is slightly higher than that for the Institute. The variations for Mills D, E, and K are rather large.

It may be noted in Table XXIII that the bursting strength results exhibit a maximum variation of six per cent (Mill J) for the current period. This is the only excessive variation noted for the current period. The average results for Mills A, B, D, I, J, K, and Q are higher than those for the Institute, the result for Mill P is the same, and the results for the other mills are lower.

It may be seen in Tables XXII and XXIII that the average machine direction tear results for Mills B, F, G and K are higher than those for the Institute, and the results for the other mills are lower. The maximum variation for the current period is seventeen per cent. The differences encountered for Mills D, K, L, M, and Q appear to be excessive; the variation for Mill M is especially large.

With regard to the cross-machine direction tear results, it may be noted that the average results for Mills A, B, E, F, G, J, K, N, and O are higher than those for the Institute, and the average results for the other mills are lower. The maximum variation for the current period is nineteen per cent. The only obviously excessive difference is the variation of nineteen per cent associated with Mill G. Several other mills exhibit variations which are on the borderline--namely, Mills K and M.

TABLE XXII

SUMMARY OF TEST RESULT COMPARISONS
(Average Mill and Institute Results)

	Mills*																
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
No. of Samples Compared	8	10	8	4	4	1	4	9	7	3	9	1	5	6	6	10	8
Basis Weight																	
Institute	43.3	42.5	42.9	42.4	42.5	42.2	42.3	43.6	43.0	43.6	43.0	42.6	42.2	42.7	42.4	43.0	43.0
Mill	43.6	42.5	43.1	42.0	42.2	42.2	42.2	43.4	43.0	43.3	43.4	43.0	42.1	42.8	42.2	42.7	43.5
Av. Diff.**	+0.3	0.0	+0.2	-0.4	-0.3	0.0	-0.1	-0.2	0.0	-0.3	+0.4	+0.4	-0.1	+0.1	-0.2	-0.3	+0.5
Max. Diff.***	+0.6	+0.8	+0.6	-0.6	-0.6	0.0	±0.3	-1.9	+0.4	-0.5	+0.8	+0.4	-0.9	+0.9	-1.0	-0.7	+1.3
Caliper																	
Institute	13.5	12.3	12.6	11.9	12.8	13.1	12.0	12.5	12.0	13.1	12.7	13.7	13.4	12.9	13.3	12.6	12.4
Mill	13.3	12.1	12.3	11.3	12.2	12.6	11.7	12.4	12.1	12.8	12.0	13.2	12.8	12.4	13.0	12.3	12.2
Av. Diff.**	-0.2	-0.2	-0.3	-0.6	-0.6	-0.5	-0.3	-0.1	+0.1	-0.3	-0.7	-0.5	-0.6	-0.5	-0.3	-0.3	-0.2
Max. Diff.***	-0.4	-0.4	-0.7	-0.7	-0.8	-0.5	-0.3	-0.6	+0.3	-0.6	-0.8	-0.5	-1.1	-0.6	-0.5	-0.6	-0.4
Bursting Strength																	
Institute	107	108	109	108	107	113	116	111	117	101	113	114	108	111	114	111	105
Mill	111	109	107	112	105	108	115	109	118	107	114	109	107	107	110	111	106
Av. Diff.**	+4	+1	-2	+4	-2	-5	-1	-2	+1	+6	+1	-5	-1	-4	-4	0	+1
Max. Diff.***	+6	+7	-6	+7	-6	-5	±5	-7	+8	+11	±4	-5	-6	-7	-7	±5	+3
Tearing Strength, in																	
Institute	318	297	360	372	346	331	352	361	317	411	336	373	334	373	338	322	355
Mill	311	323	359	335	336	344	357	359	310	383	384	320	276	347	337	311	311
Av. Diff.**	-7	+26	-1	-37	-10	+13	+5	-2	-7	-28	+48	-53	-58	-26	-1	-11	-44
Max. Diff.***	-15	+54	-32	-44	-24	+13	+26	-30	-39	-35	+75	-53	-73	-48	-51	-29	-60
Tearing Strength, across																	
Institute	353	367	388	408	374	365	388	397	369	388	384	407	358	372	371	368	387
Mill	363	378	381	375	378	377	460	396	367	409	422	376	327	385	380	361	363
Av. Diff.**	+10	+11	-7	-33	+4	+12	+72	-1	-2	+21	+38	-31	-31	+13	+9	-7	-24
Max. Diff.***	+27	-62	-33	-45	+11	+12	+103	-24	-20	+37	+67	-31	-63	+27	+39	+34	-50

* Comparison based on averages involved only those samples on which mill test data were submitted.
** Average difference is the difference between the Institute mill average and the mill average based on mill test data.
*** Maximum difference encountered in comparing the Institute average and the mill average for any sample submitted by that particular mill.

TABLE XXIII

COMPARISON OF INSTITUTE-MILL DIFFERENCES BY PERIODS

Mill	Period	Average Difference, per cent				
		Basis Weight	Caliper	Bursting Strength	Tearing Strength, In	Across
A	Current	+0.7	-1	+4	-2	+3
	104th	-0.2	-4	+3	-13	-5
	103rd	-1	-3	+5	-19	-6
B	Current	0	-2	+0.9	+9	+3
	104th	-0.2	-2	+2	+3	+4
	103rd	-1	-2	+2	+4	+2
C	Current	+0.5	-2	-2	-0.3	-2
	104th	+0.5	-2	-4	+3	-4
	103rd	+1	-3	0	+7	+2
D	Current	-0.9	-5	+4	-10	-8
	104th	-0.7	-3	+9	-2	-1
	103rd	-0.2	-3	0	+2	+3
E	Current	-0.7	-5	-2	-3	+1
	104th	-0.2	-4	-2	+0.8	0
	103rd	-1	-5	-0.9	-13	-10
F	Current	0	-4	-4	+4	+3
	104th	+0.2	-5	0	-5	+1
	103rd	-1	-6	0	-1	-0.3
G	Current	-0.2	-2	-0.9	+1	+19
	104th	-0.5	-3	+2	+9	-20
	103rd	+0.5	-3	+2	+5	+14
H	Current	-0.5	-0.8	-2	-0.6	-0.3
	104th	+1	-0.8	+0.9	+2	+2
	103rd	+0.9	-3	-0.9	+3	+0.3
I	Current	0	+0.8	+0.9	-2	-0.5
	104th	0	0	+0.8	-4	-0.3
	103rd	+0.7	0	+0.8	+0.3	+6
J	Current	-0.7	-2	+6	-7	+5
	104th	-0.5	-2	+2	-4	+4
	103rd	0	-4	+2	-7	+2
K	Current	+0.9	-6	+0.9	+14	+10
	104th	0	-4	+2	+19	+11
	103rd	+0.7	-2	-0.9	+14	+14
L	Current	+0.9	-4	-4	-14	-8
	104th	+0.9	-3	-4	-6	-6
	103rd	--	--	--	--	--
M	Current	-0.2	-4	-0.9	-17	-9
	104th	+0.2	-8	+2	-18	-12
	103rd	-0.9	-7	+2	-17	-7
N	Current	+0.2	-4	-4	-7	+3
	104th	-0.9	-4	-3	-3	+6
	103rd	-0.5	-4	-3	-5	+4
O	Current	-0.5	-2	-4	-0.3	+2
	104th	-0.9	-2	-4	-4	-0.3
	103rd	-1	-5	-3	-11	-4
P	Current	-0.7	-2	0	-3	-2
	104th	-0.9	-3	+2	-4	-3
	103rd	-0.9	-3	0	-6	-1
Q	Current	+1	-2	+1	-12	-6
	104th	+0.7	-2	0	-9	-7
	103rd	+0.7	-2	0	-15	-9

COMPARISON OF INSTITUTE AND MILL DATA--MARCH 1 THROUGH MARCH 31, 1956

TABLE XXIV

MILL A -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
168847	WF ISL	2/15/56	1	44.6	45.2	+0.6	13.3	13.1	-0.2	112	117	+5	319	317	- 2	355[a]	367	+12
168848	WF ISL	2/15/56	1	44.7	45.3	+0.6	13.2	13.1	-0.1	112	118	+6	330[a]	322	- 8	367[a]	374	+ 7
168849	WF ISL	2/20/56	1	42.2	42.3	+0.1	13.2	13.1	-0.1	104	106	+2	311[a]	302	- 9	338[a]	362	+24
168850	WF ISL	2/20/56	1	42.2	42.1	-0.1	13.4	13.0	-0.4	100	106	+6	302	308	+ 6	345[a]	350	+ 5
168851	WF ISL	2/21/56	1	44.0	44.2	+0.2	13.8	13.8	0.0	106	111	+5	322[a]	307	-15	366[a]	361	- 5
168852	WF ISL	2/21/56	1	44.1	44.5	+0.4	14.0	13.7	-0.3	110	113	+3	324	318	- 6	367[a]	369	+ 2
168853	WF ISL	2/22/56	1	42.4	42.5	+0.1	13.5	13.2	-0.3	105	110	+5	312	307	- 5	339[a]	366	+27
168854	WF ISL	2/22/56	1	42.2	42.4	+0.2	13.4	13.2	-0.2	106	110	+4	322[a]	307	-15	349[a]	359	+10
Current Mill Average:				43.3	43.6	+0.3	13.5	13.3	-0.2	107	111	+4	318	311	- 7	353	363	+10

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE XXV

MILL B -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
168705	WF1S	2/22/56	1	42.0	42.6	+0.6	12.2	11.9	-0.3	105	109	+4	291[a]	288	- 3	362[a]	333	-29
168706	WF1S	2/23/56	1	41.9	42.7	+0.8	12.2	11.8	-0.4	108	109	+1	293[a]	288	- 5	373[a]	311	-62
168768	WF1S	2/27/56	1	43.1	42.6	-0.5	12.2	12.1	-0.1	110	110	0	319	321	+ 2	379[a]	385	+ 6
168805	WF1S	2/28/56	1	42.4	42.6	-0.2	12.3	12.1	-0.2	111	111	0	289[a]	324	+35	369[a]	387	+18
168958	WF1S	3/14/56	1	42.6	42.4	-0.2	12.2	12.0	-0.2	107	109	+2	292[a]	342	+50	380[a]	409	+29
168959	WF1S	3/15/56	1	42.4	42.5	+0.1	12.2	12.3	+0.1	109	111	+2	303	335	+32	359[a]	409	+50
168960	WF1S	3/16/56	1	42.7	42.4	-0.3	12.3	12.1	-0.2	102	109	+7	308[a]	343	+35	365[a]	388	+23
169042	WF1S	3/17/56	1	42.6	42.5	-0.1	12.4	12.1	-0.3	109	110	+1	291	317	+26	349[a]	395	+46
169043	WF1S	3/18/56	1	42.5	42.5	0.0	12.3	12.1	-0.2	112	109	-3	286	340	+54	378[a]	391	+13
169044	WF1S	3/19/56	1	42.4	42.6	+0.2	12.2	12.1	-0.1	108	109	+1	297	330	+33	355[a]	375	+20
Current Mill Average:				42.5	42.5	0.0	12.3	12.1	-0.2	108	109	+1	297	323	+26	367	378	+11

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE XXVI

MILL C -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet In			Elmendorf Tear, g./sheet Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
168751	W.F.	2/27/56	-	41.8	42.2	+0.4	12.8	12.5	-0.3	104	104	0	361[a]	373	+12	401[a]	392	- 9
168769	W.F.	2/29/56	-	43.2	43.6	+0.4	12.9	12.2	-0.7	110	104	-6	375[a]	367	- 8	400[a]	367	-33
169016	W.F.	3/ 1/56	-	43.7	43.4	-0.3	12.6	11.9	-0.7	112	111	-1	374[a]	391	+17	391[a]	411	+20
169017	W.F.	3/12/56	-	43.5	43.5	0.0	12.7	12.4	-0.3	110	108	-2	364[a]	353	-11	393[a]	379	-14
169018	W.F.	3/12/56	-	43.2	43.5	+0.3	12.7	12.6	-0.1	110	108	-2	343[a]	348	+ 5	395[a]	373	-22
169019	W.F.	3/12/56	-	43.0	42.8	-0.2	12.6	12.4	-0.2	107	106	-1	353[a]	367	+14	381[a]	392	+11
169054	W.F.	3/13/56	-	43.0	42.9	-0.1	12.3	12.1	-0.2	111	108	-3	357	325	-32	372[a]	361	-11
169055	W.F.	3/13/56	-	42.2	42.8	+0.6	12.2	12.0	-0.2	112	107	-5	349[a]	345	- 4	371[a]	373	+ 2
Current Mill Average:				42.9	43.1	+0.2	12.6	12.3	-0.3	109	107	-2	360	359	- 1	388	381	- 7

TABLE XXVII

MILL D -- 42-LB. LINERBOARD

168845	W.B.	2/13/56	-	42.0	41.6	-0.4	11.8	11.1	-0.7	109	110	+1	354	316	-38	396[a]	367	-29
168846	W.B.	2/14/56	-	42.2	41.6	-0.6	11.8	11.2	-0.6	105	108	+3	353[a]	313	-40	405[a]	369	-36
169014	W.B.	2/22/56	-	43.7	43.2	-0.5	12.5	11.9	-0.6	109	116	+7	401[a]	357	-44	442[a]	397	-45
169015	W.B.	2/29/56	-	41.6	41.5	-0.1	11.4	10.9	-0.5	109	114	+5	380[a]	352	-28	389[a]	365	-24
Current Mill Average:				42.4	42.0	-0.4	11.9	11.3	-0.6	108	112	+4	372	335	-37	408	375	-33

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE XXVIII

MILL E -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
168770	W.	2/24/56	2	41.8	41.5	-0.3	12.8	12.2	-0.6	104	105	+1	345[a]	321	-24	371	375	+ 4
168924	W.	3/ 1/56	4	43.5	43.4	-0.1	13.2	12.4	-0.8	106	106	0	353	333	-20	371[a]	381	+10
168925	W.	3/ 7/56	2	42.3	42.1	-0.2	12.3	11.6	-0.7	110	107	-3	335[a]	337	+ 2	377[a]	388	+11
169053	W.	3/22/56	4	42.6	42.0	-0.6	13.0	12.7	-0.3	108	102	-6	351[a]	352	+ 1	376[a]	369	- 7
Current Mill Average:				42.5	42.2	-0.3	12.8	12.2	-0.6	107	105	-2	346	336	-10	374	378	+ 4

TABLE XXIX

MILL F -- 42-LB. LINERBOARD

168752	WFlS	2/24/56	3	42.2	42.2	0.0	13.1	12.6	-0.5	113	108	-5	331[a]	344	+13	365[a]	377	+12
Current Mill Average:				42.2	42.2	0.0	13.1	12.6	-0.5	113	108	-5	331	344	+13	365	377	+12

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE XXX

MILL G -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
168753	WF1S	2/24/56	1	42.4	42.4	0.0	12.1	11.8	-0.3	116	116	0	335[a]	357	+22	383[a]	459	+ 76
168754	WF1S	2/24/56	-	42.0	41.7	-0.3	12.1	11.9	-0.2	118	113	-5	345[a]	371	+26	378[a]	481	+103
168956	WF1S	3/ 8/56	1	42.2	41.9	-0.3	12.0	11.7	-0.3	111	113	+2	369	344	-25	390[a]	474	+ 84
168957	WF1S	3/ 8/56	1	42.6	42.9	+0.3	11.8	11.5	-0.3	116	121	+5	356	355	- 1	399[a]	426	+ 27
Current Mill Average:				42.3	42.2	-0.1	12.0	11.7	-0.3	116	115	-1	352	357	+ 5	388	460	+ 72

TABLE XXXI

MILL H -- 42-LB. LINERBOARD

168772	W.F.	2/29/56	4	42.6	43.8	+1.2	12.6	12.4	-0.2	108	108	0	385[a]	383	- 2	381[a]	371	-10
168773	W.F.	3/ 1/56	4	43.3	42.8	-0.5	12.7	12.2	-0.5	119	112	-7	374[a]	364	-10	399[a]	392	- 7
168774	W.F.	3/ 2/56	4	43.6	43.6	0.0	12.6	12.0	-0.6	114	108	-6	369[a]	339	-30	401[a]	400	- 1
168902	W.F.	3/ 7/56	4	44.6	42.7	-1.9	12.4	12.6	+0.2	113	112	-1	362[a]	349	-13	407[a]	409	+ 2
168903	W.F.	3/ 8/56	4	44.2	43.3	-0.9	12.8	12.7	-0.1	115	111	-4	371[a]	380	+ 9	423[a]	399	-24
168904	W.F.	3/ 9/56	4	44.2	43.6	-0.6	12.9	13.0	+0.1	103	104	+1	376[a]	357	-19	394[a]	391	- 3
168941	W.F.	3/14/56	4	43.2	43.6	+0.4	12.2	12.1	-0.1	109	111	+2	343[a]	353	+10	393[a]	412	+19
168942	W.F.	3/15/56	4	43.7	43.5	-0.2	12.4	12.2	-0.2	111	110	-1	345[a]	349	+ 4	392[a]	405	+13
168943	W.F.	3/16/56	4	42.8	43.4	+0.6	12.2	12.1	-0.1	104	105	+1	327[a]	355	+28	381[a]	389	+ 8
Current Mill Average:				43.6	43.4	-0.2	12.5	12.4	-0.1	111	109	-2	361	359	- 2	397	396	- 1

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE XXXII

MILL I -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
168697	W.F.	2/13/56	1	42.9	43.0	+0.1	11.6	11.9	+0.3	115	120	+5	338[a]	299	-39	369[a]	359	-10
168698	W.F.	2/21/56	1	43.0	42.7	-0.3	11.9	11.9	0.0	120	119	-1	329[a]	330	+ 1	372[a]	369	- 3
168699	W.F.	2/23/56	1	42.8	43.0	+0.2	11.8	11.8	0.0	118	121	+3	312[a]	309	- 3	379[a]	381	+ 2
168766	W.F.	2/27/56	1	42.5	42.3	-0.2	11.6	11.8	+0.2	120	117	-3	303[a]	296	- 7	349[a]	351	+ 2
168767	W.F.	2/29/56	1	42.9	42.9	0.0	11.9	12.0	+0.1	120	116	-4	311[a]	301	-10	357[a]	365	+ 8
168909	W.F.	3/ 6/56	1	43.1	43.0	-0.1	11.9	12.1	+0.2	120	118	-2	321[a]	309	-12	383[a]	363	-20
169052	W.F.	3/11/56	1	43.6	44.0	+0.4	13.3	13.2	-0.1	104	112	+8	306	329	+23	373[a]	384	+11
Current Mill Average:				43.0	43.0	0.0	12.0	12.1	+0.1	117	118	+1	317	310	- 7	369	367	- 2

TABLE XXXIII

MILL J -- 42-LB. LINERBOARD

168718	S.F.	2/24/56	7	43.7	43.8	+0.1	13.2	12.8	-0.4	101	105	+ 4	419[a]	388	-31	398[a]	413	+15
168771	S.F.	2/28/56	7	42.8	42.4	-0.4	13.2	12.6	-0.6	106	110	+ 4	394[a]	359	-35	383[a]	396	+13
169021	S.F.	3/14/56	7	44.3	43.8	-0.5	13.1	12.8	-0.3	95	106	+11	420[a]	403	-17	381[a]	418	+37
Current Mill Average:				43.6	43.3	-0.3	13.1	12.8	-0.3	101	107	+ 6	411	383	-28	388	409	+21

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE XXXIV

MILL K -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
168702	W.F.	2/21/56	2	43.3	43.7	+0.4	12.7	12.1	-0.6	116	114	- 2	346	372	+26	395[a]	400	+ 5
168822	W.F.	2/20/56	2	42.9	42.8	-0.1	12.9	12.3	-0.6	113	111	- 2	337[a]	388	+51	374[a]	405	+31
168945	W.F.	2/22/56	2	42.6	43.4	+0.8	12.8	12.1	-0.7	112	113	+ 1	347[a]	373	+26	409[a]	402	- 7
168946	W.F.	2/22/56	2	42.5	43.2	+0.7	12.9	12.1	-0.8	108	112	+ 4	321[a]	396	+75	383[a]	437	+54
168947	W.F.	2/23/56	2	42.6	43.1	+0.5	12.8	12.1	-0.7	110	113	+ 3	332	375	+43	377[a]	404	+27
168948	W.F.	2/23/56	2	43.3	43.6	+0.3	12.6	12.0	-0.6	113	117	+ 4	334[a]	382	+48	381[a]	441	+60
168949	W.F.	2/24/56	2	43.3	43.6	+0.3	12.6	11.9	-0.7	114	114	0	325	394	+69	376[a]	431	+55
168950	W.F.	2/27/56	2	43.4	43.7	+0.3	12.6	11.8	-0.8	118	114	- 4	338	387	+49	376[a]	443	+67
168951	W.F.	2/29/56	2	43.2	43.4	+0.2	12.6	11.8	-0.8	117	114	- 3	349	386	+37	384[a]	433	+49
Current Mill Average:				43.0	43.4	+0.4	12.7	12.0	-0.7	113	114	+ 1	336	384	+48	384	422	+38

TABLE XXXV

MILL L -- 42-LB. LINERBOARD

168727	W.F.	2/ 9/56	4	42.6	43.0	+0.4	13.7	13.2	-0.5	114	109	- 5	373[a]	320	-53	407[a]	376	-31
Current Mill Average:				42.6	43.0	+0.4	13.7	13.2	-0.5	114	109	- 5	373	320	-53	407	376	-31

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE XXXVI

MILL M -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
168707	WFlS	2/23/56	2	41.7	40.8	-0.9	14.1	13.0	-1.1	103	105	+2	315[a]	244	-71	377[a]	314	-63
168717	WFlS	2/27/56	2	42.6	43.4	+0.8	13.5	12.9	-0.6	98	98	0	345[a]	312	-33	359[a]	351	- 8
168954	WFlS	3/14/56	2	42.1	42.6	+0.5	12.9	12.9	0.0	114	116	+2	351[a]	294	-57	365[a]	362	- 3
168955	WFlS	3/15/56	2	42.0	42.0	0.0	13.1	12.2	-0.9	115	112	-3	330[a]	272	-58	343[a]	297	-46
169046	WFlS	3/22/56	2	42.7	41.8	-0.9	13.2	12.8	-0.4	108	102	-6	329[a]	256	-73	347[a]	310	-37
Current Mill Average:				42.2	42.1	-0.1	13.4	12.8	-0.6	108	107	-1	334	276	-58	358	327	-31

TABLE XXXVII

MILL N -- 42-LB. LINERBOARD

168708	W.F.	2/21/56	-	43.3	43.6	+0.3	12.8	12.3	-0.5	116	109	-7	393[a]	368	-25	391[a]	403	+12
168709	W.F.	2/21/56	-	43.4	43.7	+0.3	13.2	12.6	-0.6	110	108	-2	405[a]	385	-20	389[a]	416	+27
168862	W.F.	3/ 2/56	-	42.6	42.2	-0.4	13.1	12.8	-0.3	106	104	-2	349[a]	318	-31	341[a]	361	+20
168863	W.F.	3/ 2/56	-	42.4	42.1	-0.3	12.8	12.2	-0.6	110	106	-4	355[a]	307	-48	360[a]	346	-14
169012	W.F.	3/13/56	-	42.0	42.3	+0.3	12.8	12.3	-0.5	110	106	-4	365[a]	339	-26	377[a]	389	+12
169013	W.F.	3/13/56	-	42.2	43.1	+0.9	12.6	12.2	-0.4	115	108	-7	370[a]	364	- 6	375[a]	396	+21
Current Mill Average:				42.7	42.8	+0.1	12.9	12.4	-0.5	111	107	-4	373	347	-26	372	385	+13

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE XXXVIII

MILL O -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet: In			Elmendorf Tear, g./sheet: Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
168755		2/11/56	1	42.5	42.0	-0.5	13.5	13.3	-0.2	113	106	-7	331[a]	280	-51	363[a]	351	-12
168756		2/13/56	1	41.8	41.9	+0.1	12.6	12.2	-0.4	118	114	-4	322[a]	358	+36	353[a]	392	+39
168757		2/16/56	1	43.6	42.6	-1.0	13.9	13.6	-0.3	113	106	-7	353[a]	323	-30	387[a]	368	-19
168758		2/21/56	1	41.9	42.3	+0.4	13.4	13.2	-0.2	108	108	0	344[a]	354	+10	383[a]	382	- 1
168806		2/24/56	1	42.0	41.8	-0.2	12.7	12.3	-0.4	116	110	-6	332[a]	347	+15	370[a]	380	+10
168807		2/27/56	1	42.4	42.5	+0.1	13.7	13.2	-0.5	118	118	0	344[a]	358	+14	371[a]	405	+34
Current Mill Average:				42.4	42.2	-0.2	13.3	13.0	-0.3	114	110	-4	338	337	- 1	371	380	+ 9

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE XXXIX

MILL P -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
168703	W.F.	2/21/56	2	44.0	43.4	-0.6	13.1	12.5	-0.6	116	113	-3	334	321	-13	373[a]	349	-24
168704	W.F.	2/23/56	2	42.3	42.4	+0.1	12.5	12.0	-0.5	109	113	+4	317	305	-12	369[a]	367	- 2
168823	W.F.	2/26/56	2	42.9	43.1	+0.2	12.6	12.2	-0.4	109	110	+1	316[a]	294	-22	354[a]	357	+ 3
168824	W.F.	3/ 1/56	1	43.3	42.8	-0.5	12.6	12.3	-0.3	109	109	0	323	339	+16	361[a]	395	+34
168890	W.F.	3/ 4/56	2	43.4	42.7	-0.7	12.7	12.6	-0.1	110	110	0	325	310	-15	377[a]	372	- 5
168891	W.F.	3/ 6/56	1	43.5	42.9	-0.6	12.6	12.2	-0.4	105	110	+5	333	304	-29	377[a]	366	-11
168980	W.F.	3/12/56	2	42.0	42.3	+0.3	12.2	12.0	-0.2	108	111	+3	318	310	- 8	357[a]	340	-17
168981	W.F.	3/12/56	2	42.1	42.3	+0.2	12.1	12.0	-0.1	118	113	-5	315[a]	313	- 2	357[a]	346	-11
169032	W.F.	3/19/56	2	42.7	42.4	-0.3	12.8	12.3	-0.5	112	110	-2	321[a]	299	-22	371[a]	351	-20
169033	W.F.	3/19/56	2	43.4	42.9	-0.5	12.5	12.4	-0.1	111	114	+3	317[a]	317	0	383[a]	367	-16
Current Mill Average:				43.0	42.7	-0.3	12.6	12.3	-0.3	111	111	0	322	311	-11	368	361	- 7

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE XL

MILL Q -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
168700	W.F.[b]	2/20/56	2	42.3	42.8	+0.5	12.5	12.1	-0.4	101	102	+1	355[a]	295	-60	377[a]	342	-35
168701	W.F.[b]	2/21/56	2	43.4	44.0	+0.6	12.5	12.1	-0.4	110	108	-2	355[a]	323	-32	387[a]	371	-16
168803	W.F.[b]	2/29/56	2	43.7	43.9	+0.2	12.7	12.4	-0.3	109	109	0	354[a]	321	-33	386[a]	381	- 5
168804	W.F.[b]	3/ 1/56	2	43.1	43.1	0.0	12.5	12.2	-0.3	107	108	+1	355[a]	307	-48	379[a]	350	-29
168892	W.F.[b]	3/ 5/56	2	43.1	43.3	+0.2	12.6	12.2	-0.4	106	106	0	351[a]	312	-39	363[a]	347	-16
168893	W.F.[b]	3/ 6/56	2	42.4	43.5	+1.1	12.0	11.8	-0.2	104	105	+1	367[a]	309	-58	409[a]	359	-50
168952	W.F.[b]	3/11/56	2	42.5	43.8	+1.3	11.8	12.0	+0.2	105	105	0	355	334	-21	394[a]	381	-13
168953	W.F.[b]	3/12/56	2	43.2	43.7	+0.5	13.0	13.0	0.0	102	105	+3	345	289	-56	403[a]	377	-26
Current Mill Average:				43.0	43.5	+0.5	12.4	12.2	-0.2	105	106	+1	355	311	-44	387	363	-24

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.
[b]The mill data sheet identifies the finish as WF1S.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--MARCH 1 THROUGH MARCH 31, 1956 (continued)

TABLE XLI

MILL R -- MISCELLANEOUS

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
47-lb. Drum Linerboard																		
168864	W.F.	3/ 1/56	2	47.0	48.2	+1.2	14.3	13.7	-0.6	97	94	-3	384[a]	384	0	369[a]	404	+35
Current Mill Average:				47.0	48.2	+1.2	14.3	13.7	-0.6	97	94	-3	384	384	0	369	404	+35
38-lb. Linerboard																		
168865	WF1S	3/ 7/56	2	38.6	38.4	-0.2	12.1	11.6	-0.5	90	88	-2	337[a]	309	-28	313[a]	297	-16
169047	WF1S	3/23/56	2	38.2	38.8	+0.6	11.8	11	-0.8	90	92	+2	331[a]	255	-76	300[a]	274	-26

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.